

In re AKEMAKOU
09/700,877
IN THE CLAIMS

Please amend claim 1 as follows.

1. A rotary electrical machine, comprising a stator (S), a rotor (R), an airgap (E) between the stator (S) and the rotor (R), and permanent magnets incorporated in at least one of the rotor and the stator, wherein the magnets constitute at least a first group of magnets containing rare earths and a second group consisting of ferrite magnets, wherein a plurality of sub-assemblies (720, 721-731, 730, 732-800, 810 ...) is provided, each sub-assembly combining at least one magnet of the first group with a magnet of the second group arranged in superimposed relationship in a generally radial direction and wherein, at least one of said magnets being disposed radially so as to generate an orthoradial magnetic flux.

Please add new claims 9-17 as follows.

9. A rotary electrical machine, comprising a stator (S), a rotor (R), an airgap (E) between the stator (S) and the rotor (R), and permanent magnets incorporated in at least one of the rotor and the stator, wherein the magnets constitute at least a first group of magnets containing rare earths and a second group consisting of ferrite magnets, wherein a plurality of sub-assemblies (720, 721-731, 730, 732-800, 810 ...) is provided inside the rotor, each sub-assembly combining at least one magnet of the first group with at least one magnet of the second group, at least one of the said magnets being oriented radially so as to generate an orthoradial magnetic flux, and

wherein each sub-assembly comprises a magnet containing rare earths (730) interposed, in a radial direction, between two ferrite magnets (731, 732).

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10. An electrical machine according to Claim 9, wherein each sub-assembly comprises a magnet containing rare earths (910) situated close to the airgap (E) and in superimposed relationship in a generally radial direction with a ferrite magnet (900a, 900b) of the same thickness as the rare earth magnet, the said ferrite magnet including indexing means defined by at least one of a chamfered portion (9000a) and a notch (9000b).

11. An electrical machine according to Claim 10, wherein the first group consisting of rare earth magnets is of smaller size than the second group consisting of ferrite magnets.

12. An electrical machine according to Claim 11, wherein the sub-assemblies are mounted in the rotor (R).

13. An electrical machine according to Claim 12, wherein each sub-assembly consists of a magnet of the first group (721, 810 ...) situated close to the surface of the rotor (R) and arranged in superimposed relationship in a generally radial direction with a ferrite magnet (720, 800) situated close to the axis of rotation of the rotor.

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14. A rotary electrical machine, comprising a stator (S), a rotor (R), an airgap (E) between the stator (S) and the rotor (R), and permanent magnets incorporated in at least one of the rotor and the stator, wherein the magnets constitute at least a first group of magnets containing rare earths and a second group consisting of ferrite magnets, wherein a plurality of sub-assemblies (720, 721-731, 730, 732-800, 810 ...) is provided inside the rotor, each sub-assembly combining at least one magnet of the first group with at least one magnet of the second group, at least one of the said magnets being oriented radially so as to generate an orthoradial magnetic flux,

wherein each sub-assembly comprises a magnet containing rare earths (721, 810) situated close to the airgap (E), arranged in superimposed relationship in a generally radial direction with a ferrite magnet (720, 800), and

wherein each sub-assembly comprises a magnet containing rare earths (910) situated close to the airgap (E) and in superimposed relationship in a generally radial direction with a ferrite magnet (900a, 900b) of the same thickness as the rare earth magnet, the said ferrite magnet including indexing means defined by at least one of a chamfered portion (9000a) and a notch (9000b).

15. An electrical machine according to Claim 14, wherein the first group consisting of rare earth magnets is of smaller size than the second group consisting of ferrite magnets.

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16. An electrical machine according to Claim 15, wherein the sub-assemblies are mounted in the rotor (R).

17. An electrical machine according to Claim 16, wherein each sub-assembly consists of a magnet of the first group (721, 810 ...) situated close to the surface of the rotor (R) and arranged in superimposed relationship in a generally radial direction with a ferrite magnet (720, 800) situated close to the axis of rotation of the rotor.